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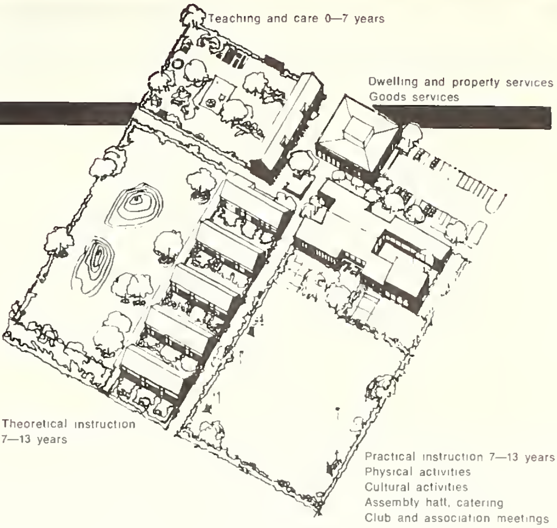
# FEDERAL DESIGN MATTERS

## Friedan: New Family Housing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Theoretical instruction
7—13 years
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Physical activities
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Assembly hall, catering
Club and association meetings

Swedish housing: small unit service block.

*Betty Friedan is the author of* The Feminine Mystique *and* It Changed My Life. *She was the founder and first president of the National Organization for Women (NOW). She has conducted workshops on the implications of changing sex roles for housing and for planning at the Aspen Design Conference. Her newest book,* The Second Stage, *will be published this spring. Currently, she is Senior Research Associate at the Center for Social Studies at Columbia University Alen Buchsbeum* is a partner in the architectural firm of Design Coalition, New York City.

**Buchsbeum:** Before we discuss housing possibilities, will you define the new family?

**Frieden:** We have to break through the family mystique. Many people have an image of the family with mother as the housewife, papa as the breadwinner, two children, the cat, the dog, the little house, and the station wagon. Do you know that only 7% of Americans live in households that conform to this image? If you say one child, you can raise the number to 17%. The great majority of Americans live in many different kinds of households.

The typical married family is a two-wage earner family where the mother and the father share the responsibility for the house and the children. However, there are vastly increasing numbers of single parent-families, there are couples either not having children or postponing having children, and there are couples whose children have moved away from home. The greatest increase can be seen in the numbers of people living alone, especially women over sixty who are widowed or divorced. The women's move for equality and Americans' longer life spans have not destroyed the need for the family, but have caused the concept of family to evolve in different directions.

The definition of "family" that I like is formulated by a group that is not very radical, The American Home Economic Association. It defines the family as two or more persons who share resources, share values and goals, and have commitments to one another over time. The family is that climate that "one comes home to," and it is this network of sharing and commitments that most accurately describes the family unit regardless of legal ties, adoption, or marriage.

**Buchsbeum:** Are you espousing a different kind of housing for the "new families"?

**Frieden:** The financing of housing, the concepts that govern the design of housing and its zoning, have all been based on the old idea of family. There are a few exceptions: college dormitories, military housing, and senior citizen complexes. Otherwise today's housing does not recognize the changes in today's family. For instance, we have not developed new concepts for zoning, financing, and design suited to the lifestyles of the great majority of people. It seems that neither builders nor architects acknowledge that most people do not conform to what I call the Good Housekeeping Seal of Approval kind of family. Last month one of the banking institutions came out with the news that it takes a two-income family to produce enough income to buy a house. Husband and wife both have to be wage earners. Yet the housing that's designed today isn't really designed with the couple in mind: it's still designed as if the woman were the full-time servant of the house.

**Buchebaum:** Can you be specific?

**Friedan:** Now wait a minute, let me just finish. If it takes two incomes to buy a house today, what happens to the single-parent families, most of which are headed by women? And what about all those people living alone? We need some provisions for pooling resources to buy houses; and we need to design and build a new kind of housing that will recognize people's need for family support systems. Imagine a couple with children already grown, or a woman living alone after she's been widowed. Both may have as many years left to occupy a house as that young couple getting a mortgage for the house that they're going to use while their children are growing. But there is no housing that has been designed, built and financed in a way that takes into account the new mortgage necessities the new family requires. The only federal concession to the new family's housing needs is the tax law which allows you to take money from the sale of one house and reinvest it in other real estate without paying a tax. But no one seems to understand the new kind of financing and housing needed. I'm not talking about the most wealthy people and their housing, I'm talking about people in all income brackets who need different kinds of housing—housing that recognizes the different shape into which the family is emerging and even the family needs of people living alone

**Buchsbaum:** Well, my question is this. Have you thought of what central facilities these new groups need?

**Friedan:** In Sweden, they have a kind of housing called service housing. These are ordinary middle income apartment buildings, with long waiting lists. The apartments are simple and the kitchen is not a big deal—not as central as in American apartments. But the individual apartment is only one aspect of living there. In the complex there is a nursery, a child care center for children from 6 weeks to kindergarten, and preschool and after school activities for teenagers. Activities can be planned for all day if both parents work—or for any part of the day. There is much more emphasis on communal services like laundry and eating. There is a service dining room and kitchen. As part of the rental of the apartment, you are committed to take a certain number of meals in the common dining room, which is not as formal as eating out in a restaurant. And the interesting thing to me was the conventional and single parent families took more meals in the common dining room then they were required to do by their rental contracts. It saved work for the single parent families, and there were the aunties and uncles that accrued for the children.

Sweden now has a housing policy that requires every new apartment to have facilities for communal child care and other such service facilities. They also recognize that such services are needed in existing neighborhoods, and there are provisions for building them into these neighborhoods in the future. It seems to me that architects, designers, developers and planners have to get beyond the concept of the individual house and/or apartment, because the new family implies a sharing of services and space that brings back the old concept of the extended family, which may or may not have ever existed in America. Although three generations don't live any longer under the same roof, or on the same block or in the same neighborhood, the new extended family of choice takes varying shapes at varying times. Concomitantly with the new family, one has to consider the American tradition of individualism and privacy—somehow the two concepts must be bridged.

Everyone should be thinking about a new kind of housing—architects, planners, politicians and bankers. We should be planning housing for Americans who are not having children, whose children are grown, who are living alone, who are single parents, who are living in non-related units We need innovative housing for roommates, older people, couples without the benefit of marriage, couples of different sex or the same sex, and for people living together not for sexual reasons but to pool resources There is nothing being designed for these categories of people.

I would think that what we need are experimentation, research, and pilot projects. We need to discover the appropriate balance between the individual's privacy and his need for root and for home. We need to mix these very strong American traditions and the new need for communal sharing of space and services. We need a lot of new education on this subject and trial and error pilot projects to discover what works and what doesn't work James Rossant, the architect, has tried to suggest new kinds of housing and he always runs afoul of government, financing and rigid conventional concepts.

**Buchsbaum:** A standard developer is not going to add any amenities that he can't make a profit on in some way. We do have structures in either co-operative or condominium type buildings where service sharing could be added. But one isn't going to find these kinds of amenities unless either the developer will find them financially attractive or the government will figure out some way to subsidize them by tax abatements or zoning bonuses.

**Frieden:** Why not have a tax incentive? Remember, the great FHA mortgage was a great boon to housing as well as to people. so many young families got homes that way. Now we need imaginative financing for people in these other kinds of families, as the demographics of this nation changes. Currently there's no encouragement for builders and architects to work on these problems. Of course, I'd like to see it start by somebody making a profit on it. You can see the germ of it happening in the senior citizen communities and the apartment buildings geared to singles.

**Buchsbaum:** Do you think groups have to be segregated, such as older people living with older people?

**Friedan:** I don't think we know the answer to that one. I think that communities must be built on an affinity of like interest. After World War II when people were all having children, there were communities of affinity Many people were going through that early child-rearing period and the garden apartments popular then were very successful. Now, it's going to take experimentation to find out what will work; but it had better be done When we get down to the bottom line, we have to realize that the nuclear family on which all architecture, all mortgage financing, and all zoning are based only takes care of a minority of Americans

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# The Envelope Please . . .

**Barbara Goldstein**

In 1972, when The Energy Crisis was declared official, few Americans were really worried about the rising cost of oil. Now that the reality of the situation has affected many households, the importance of developing and safeguarding alternative sources of energy has become clear. Among these sources, the least expensive and by far the most abundant is solar energy. By utilizing the sun for heating, lighting and perhaps even cooling our buildings, we can substantially reduce our dependence on fossil fuels.

California now leads the nation in the area of solar access. The Solar Rights Act of 1978 (The Levine Bill) defines solar easements, makes them legal, and erases any restrictions on them. The Solar Shade Control Act defines shading, and outlines the types of vegetation allowed to shade property. As a result of these two laws, there are 16 local ordinances in effect throughout the state, and many others pending. San Diego and Santa Clara counties require solar water heating for all new houses. Los Angeles has a similar ordinance now before its city council; it already requires that Solar Access reports be filed with the planning department for all new subdivisions.

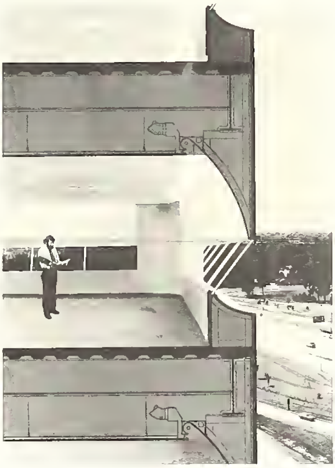
The most significant formal aspect of the research is its use of the solar envelope concept. The solar envelope was originally developed in 1969 by Professor Ralph Knowles of the University of Southern California's School of Architecture. The solar envelope provides a means of translating the decision of where and when solar access is desired into a volume that can be used by designers or for zoning purposes. The envelope can be tailored to specific site conditions, as set out by the designer and local codes.

Outside California, similar attempts at solar zoning are being made on a more tentative basis. In Chattanooga, Tennessee, for example, the Tennessee Valley Authority is building two million square feet of offices which utilize the solar envelope concept in combination with local zoning codes. They hope that this development can serve as a prototype for the city to develop its own ordinances to protect solar access; and they will present their findings to the city planning commission for possible adoption into the city's codes.

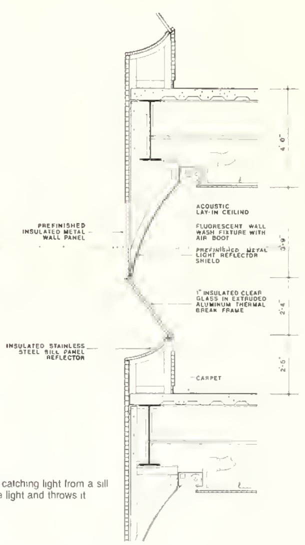
In Lincoln, Nebraska, the planners have devised a method of initiating solar access proposals using an incentive method. They are not utilizing the solar envelope, but have devised their own, slightly simpler solar access requirements. If a developer meets the energy standards for solar access, the city will grant up to a 20% increase in the amount of dwelling units allowed on the site. In return for this, the developer must provide a shadow plan showing the buildings and what they shade, and provide covenants that future developments will not shade the walls of the abutting property. In addition, the housing must have proper overhangs on the south wall to protect windows from summer heat gain while providing sufficient heat

# Daylight Delights At IBM

**Julia Henshaw Wise**



Only 20% of the IBM's exterior wall is glass. The ribbon windows slope outward catching light from a sill and tossing it into a curved reflector inside the building which further diffuses the light and throws it deeper into the office spaces


ACOUSTIC LAY-IN CEILING
PREFINISHED INSULATED METAL WALL PANEL
FLUORESCENT WALL WASH FIXTURE WITH AIR BOOT
PREFINISHED METAL LIGHT REFLECTOR SHIELD
1" INSULATED CLEAR GLASS IN EXTRUDED ALUMINUM THERMAL BREAK FRAME
INSULATED STAINLESS STEEL SILL PANEL REFLECTOR
CARPET
4'-6"
3'-9"
2'-4"
2'-6"

Daylighting and many other energy-saving features are an integral part of the design of Gunnar Birkert's IBM Regional Headquarters building in Southfield, Michigan. The 14-story, steel-framed "stubby skyscraper" has been fully occupied since early 1979. Although the company has not yet studied worker productivity in its daylit office space, nearly everyone concerned seems to be pleased with the building from every point of view.

Standing amidst a number of undistinguished new buildings, many of which are glass-curtain-walled, the IBM building looks distinctly different. Its windows are only two feet high, wrapping around each story like a narrow ribbon. The building's metal skin covers 80% of the exterior wall surface area, yet these narrow windows admit and effectively distribute daylight to the interior of the building: it's a trick done with two reflectors.

The windows are not flush with the exterior walls, but slant in from top to bottom; they are surrounded by a system of reflecting sills and overhead reflecting panels which diffuse and carry natural light to the interior (see diagram). This design is so effective in its distribution of daylight that the number and size of the fluorescent fixtures used to supplement the daylight are significantly less than necessary in conventional lighting situations. On dark days and in the evening a strip of fluorescent lights recessed next to the interior overhead reflecting panels is activated by photo-sensors; beyond the most peripheral areas of the building there are also fluorescent fixtures recessed into the acoustic lay-in ceiling: these are operated by ordinary manual switches. People who work in offices around the perimeter of the building agree that there is little need for any artificial lighting most of the time; however, some people have not yet overcome the habit of automatically switching on a light when they enter a room.

The diffused light which surrounds the windows gives the inside walls a soft glow and compensates for window narrowness. The placement of the window strip at eye level when seated actually seems to expand the view. Because of the narrowness of the opening and its low position within the room, the sun, even when it is very low in the sky, does not shine directly in but lands on the reflecting sill instead. Thus neither shades nor drapes are needed.

A different low-keyed color is used for decorative accents on each floor; pastel colored walls and furnishings give further lightness to the softly diffused daylight. Under conventional artificial light, or in a building with floor-to-ceiling windows, these interiors might seem too stark and pale, but here the gentle reflected daylight softens the whole atmosphere inside the building. In the very core of the building where daylight cannot reach, bright red is used as the primary circulation color

The benefits of daylighting design are to a great extent lost on those floors where a solid wall of cubical offices ring the periphery and block the light. However, employees agreed that they found the building a pleasant working environment no matter where their own personal working space was located

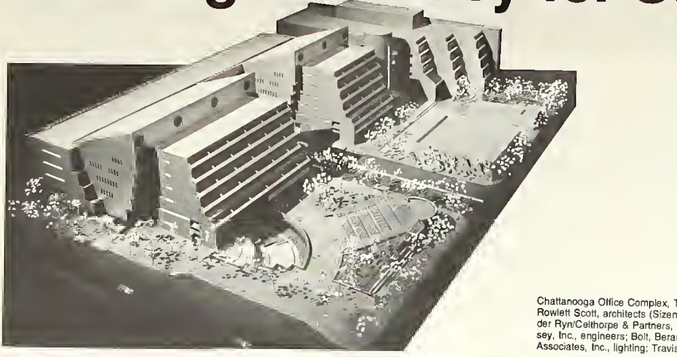
A spokesperson for IBM says that the actual level of energy savings has not been quite as high as projected in the specifications. Once sufficient performance data has been collected, adjustments can be made to bring the building up to peak operating efficiency; meanwhile IBM's administration is more than satisfied with the present low level of energy consumption.

Although the daylighting system is the most conspicuous of the building's energy-efficient systems, there are other energy-saving devices in use throughout the building in heating and air-circulation systems: for example, water is supplied to sinks in the bathrooms in only one temperature, warm.

Perhaps the most far-reaching benefit of this energy-efficient design is the way that it has raised employee awareness about energy conservation. Several employees point out that since working at IBM they have become more conscious of the wasteful use of energy in their own homes, and they are pleased to be learning how to save money with increased reliance on sun-heat and daylight.

It seems fair to conclude that the distinctive exterior and pleasant interior of the IBM Southfield building are another testimonial to the idea that design which grows out of practical considerations need not sacrifice aesthetics to utility, and can often be the most successful design of all.

# Growing Advocacy for Solar Access



penetration in winter; and solar screens must be provided on the east and west facing walls. The developers must bring their proposals before a review panel consisting of members of the city's planning staff, park department and sewage department. The plans must then receive public hearings before being voted on in council. Lincoln now has two proposals for this type of development proceeding through the planning process. The planners believe that once these developments have been built, other property developers will see the advantages of meeting these criteria.

Although the application of solar access ordinances is still in its seminal phase, the examples cited give an idea of the variety of solutions which are available. Since these concepts have only recently been introduced, it will be some time before it is possible to study the various solutions and to see what shape our cities will take as a result of these demands. However, if solar access development work is to succeed, it must receive increasing support from government bodies in numerous communities. It may be essential to our future.

Chattanooga Office Complex, TVA. Members of the design team of the Chattanooga building are: Caudill Rowlett Scott, architects (Sizemore/CRS, Bickle/CM); The Architects Collaborative, Inc., architects; Van der Ryn/Calthorpe & Partners, architects; TVA Architectural Design Branch, architects; Syska & Hennessey, Inc., engineers; Bolt, Beranek & Newman, Inc., acoustics; LeMessurier/SCI, structural; William Lam Associates, Inc., lighting; Travis Price, energy.

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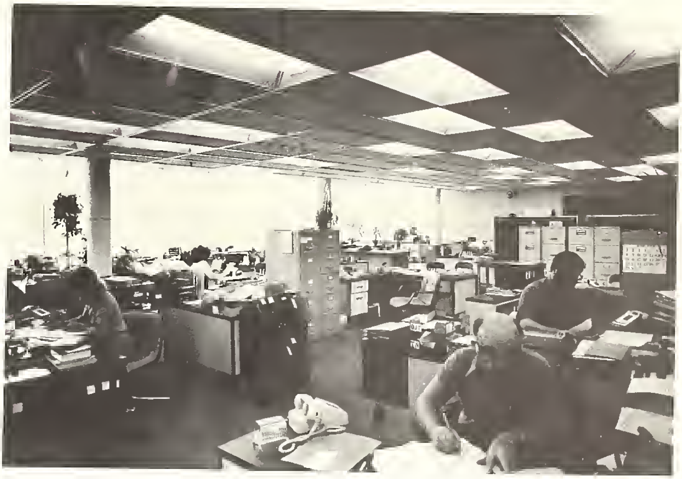
# Office · Design · Status or Productivity?

**Paul Sechner**

The American office is undergoing a quiet but indisputable transformation. Until a few years ago, most of this country's white-collar work force labored in one of two basic office types: the "conventional" type, which is usually a series of private rooms set in a row with secretarial/reception areas adjacent, or the office "pool," a large unadorned room whose main distinguishing feature is the monotonous rows of desks that seem to symbolize clerical drudgery. Recently, however, interior designers and manufacturers of office furniture have begun to abandon these two classic office schemes in favor of a variety of "open" layouts. Introduced in Germany and Scandinavia about 20 years ago, open plan offices are characterized by moveble partitions and modular work stations that allow for maximum flexibility in space planning. The capacity for change in contemporary work spaces is particularly significant as offices must be adaptable to the growing use of electronic equipment, especially micro-computers, which require new forms of work and storage areas.

Into these new environments are thrown millions of employees whose desire for a comfortable working atmosphere has not changed over the years. As office design has become more complex, it is increasingly clear to the powers-that-be that such basic human needs as privacy, intercommunication, light, space, and overall physical comfort have a major impact on productivity and general quality of working life. Recognizing the need for more up-to-date information on the relationship of office design to worker productivity, government and private employers have joined forces to sponsor several studies of this complex issue. The results of these investigations should have a far-reaching effect on the direction that office design will take in the face of increasing budget constraints on one hand, and the need to retool spaces with the technologically sophisticated business communications equipment of the 1980's.



Federal Office Building, Ann Arbor, Michigan. When open office systems are furnished improperly, disaster results. In this case GSA decided not to purchase the sound-absorbing furniture that might have made the building work

The most comprehensive study ever undertaken to analyze the impact of the office environment on productivity is presently being carried out by the Buffalo Organization for Social and Technological Innovation (BOSTI), a non-profit research corporation that employs a 20-person team representing the disciplines of architecture, management, economics, social psychology, and human factors engineering. Managed by BOSTI vice-president Pamela Clayton and originally underwritten by the National Science Foundation, the National Endowment for the Arts, the U.S. General Services Administration, and Owens-Corning Fiberglas, the program represents an investment of over $300,000 in public and private funding. The study's primary method of gathering information is an in-depth survey of about 10,000 workers and managers in 100 public and private sector offices across the country who are now moving or substantially changing their environment. While it evaluates the effect of such changes in office environment, the research also has identified the characteristics of offices which have an impact on job satisfaction and productivity and, in the future, will examine ways in which new business technology affects satisfaction and productivity.

A significant factor in the study is that nearly all the workers surveyed are moving from conventional offices into open offices with systems furniture. Although the final analysis of the study will not be available until 1981, some preliminary results are already in. According to BOSTI president Michael Brill, most organizations move some of their workers quite often, and others not at all. Therefore, within an organization, there may be a need for open office systems furniture to accommodate the movement of workers combined with fixed office systems for employees who stay put. This seemingly simplistic finding actually has important implications for architects, who tend to design all office spaces within a single building one way or the other. Perhaps open systems should be used for some areas, conventional plans for others.

Brill also reports some interesting early findings on the issue of privacy and noise distraction. Although people in open and private offices hear the same noises, those situated in open offices are bothered more by these noises. Brill attributes this phenomenon to the fact that those in private offices have a sense of control over the noise—they can always shut the door. This finding would lead one to the conclusion that given the choice, most people would like to have a private office. Not so, says Brill; about two-thirds of those surveyed work better and enjoy their jobs more in the presence of others. Manufacturers of open office systems often use the argument that social contact facilitates communication and interaction among people and stimulates productivity; the BOSTI survey appears to show this contention to be true. However, BOSTI consultant Eric Sundstrom, Associate Professor of Psychology at the University of Tennessee at Knoxville, has found that while both privacy and interaction are positively correlated to job satisfaction, participants in his research generally preferred privacy over accessibility. Sundstrom's work in this area suggests that many open office plans lack the features related to worker satisfaction with their spaces, especially those that limit audibility and visibility. Far from writing off the open plan office, Sundstrom indicates that this system may need more provisions for privacy—such as room dividers, sound-absorbent partitions, and acoustical ceilings and walls—to achieve more acceptance by workers.

An exhaustive survey conducted by Louis Harris & Associates for Steelcase, manufacturers of open systems furnishings, confirms Sundstrom's findings on the importance of privacy to satisfaction. The Steelcase study concluded, among other things, that workers felt the single most significant factor in doing a good job is "the ability to concentrate without noise and other distraction." "Conversational privacy" was also cited as a major concern, particularly for those moving from conventional to open offices. Steelcase contends that when building planners use open systems furnishings properly, with the correct sound-absorbing materials specified by the manufacturer and architect, workers at once can enjoy quiet and social interaction in an office that managers favor for its flexible qualities.

When open systems are constructed in an improper manner, disaster can follow. A good case in point is a Federal office building recently completed in Ann Arbor. The GSA originally called for an open office landscape for the structure, and the architects specified that the furnishings be part of the overall office design plan. By the time the building was ready for occupancy, however, GSA decided not to follow through on its commitment to purchase the systems furniture that could have made the building work. Instead, the 15 agencies that occupy the Ann Arbor structure brought their old furniture with them—conventional desks and chairs in an open office setting. In order to evaluate employee reaction to the building, Robert W. Marans, Professor of Architecture & Urban Planning at the University of Michigan Institute for Social Research, has been conducting a study of the structure under a grant from the National Bureau of Standards. Complete results should be available at the end of the year. Thus far Marans has discovered that while 8 out of 10 of the general public surveyed feel the building fits in well with downtown Ann Arbor, a large majority of employees questioned rate the structure's work space fair or poor from aesthetic and functional points of view. Lack of privacy and unbearable noise levels appear to be the major complaints, a result no doubt of the faulty use of old furniture in a space intended to accommodate open modules.

While it is clear that the open office configuration is here to stay, it is also apparent that it is not for everyone. Wally Joneson, President of the American Society of Interior Designers, seems correct when he notes that law offices, with their requirement for the kind of privacy that can be attained only behind closed doors, are not appropriate customers of open systems furniture. Nevertheless, ASID itself, desiring flexibility and provision for change, is choosing an open system for its new Park Avenue office in New York.

Whatever kind of office environment a firm chooses, it would do well to consult the findings of these and other research projects. By examining the effects of the working environment on productivity and satisfaction, such surveys as the BOSTI study will no doubt be referred to again and again as management seeks ways of getting the most for its design dollars. Architects, interior designers, and manufacturers of office equipment will use the study as guidelines for their own work. Finally, white-collar America should derive enormous benefits in increased happiness and contentment on the job—a significant advantage for those of us who spend so many of our waking hours behind desks.

# Cordish Defines UDAG's Design Requirements

*David S. Cordish is interviewed by FDM's Editor, Leslie M. Freudenheim.*

*David S. Cordish, Director of the Urban Development Action Grant Program, believes design is only one of the many important issues to be weighed before a grant is awarded. William Fleissig is a San Francisco architect dedicated to the improved livability of American cities. He considers UDAG's design review requirements insufficient. Their differing perspectives and the relative importance each assigns to project design become evident in these articles.*

**Freudenheim:** How are UDAG grants awarded?

**Cordish:** There are about eight selection factors which must be weighed when picking a project and no one project satisfies all criteria. One of the most important factors, in my opinion, is the distress level of the city.

**Freudenheim:** Do you help the city choose the architect for a project?

**Cordish:** There is no way in our process to dictate what applicants do; we don't even suggest what they might apply for. A city must determine its own priorities. The Mayor and City Council along with a private developer initiate the concept and must hold two public meetings to discuss it. We in Washington might disagree with the city's priorities but the choice rests with the city. Since we cannot dictate even the broad area in which a city should apply, we certainly cannot dictate how to choose the architect or developer.

**Freudenheim:** Which projects have turned out to be best suited to their context?

**Cordish:** We are trying to stimulate private investment in distressed cities to create jobs and taxes. Take Clarksburg, West Virginia: Anchor-Hocking said that with help from UDAG they would be willing to reopen an abandoned factory and produce glass again.

**Freudenheim:** That would create permanent jobs?

**Cordish:** Yes, and that's our goal. We have nothing against construction jobs, but our goal is permanent jobs, and permanent taxation—new permanent revenue for the city. Take this project in Clarksburg. If you ask me about it aesthetically, I don't know what to say: it's a big factory; the exterior of the building was not improved. We have employed 2,000 people and generated tax revenues. To put it in terms of architects and aesthetics, I wouldn't know how. And there are dozens of such projects in our program. How can I compare sexy silos being converted into a hotel in Akron, Ohio and a factory being reactivated in Clarksburg, West Virginia?

**Freudenheim:** Do you stipulate that design review must be part of environmental review?

**Cordish:** We send a series of questions that should be used as guidelines in doing environmental assessments. They are questions about design as well as about historic preservation, etc. If they don't follow these guidelines, a local group usually catches them at the public hearing. State agencies also review the application and send comments to HUD; but you can't please everyone on every project. Most often those objecting to aesthetics or environmental impact are really business competitors of those applying. When it comes to aesthetics you will always find differing viewpoints.

**Freudenheim:** It has been said, "Applicants are expected to consider the quality of the design of the project." Do you specify how? Do you insist applicants review the context into which they will put the new project?

**Cordish:** We have to look at the context of that city, that neighborhood, that environment, and see whether that project is in scale. Design is a key element of environmental sensitivity. The likelihood of winning the award is less if the design is not good. If the design is excellent, it adds to the grant: design is a competitive selection factor. You might have a design which is so appealing that it can override a negative environmental aspect; but no one criterion is elevated or mandated over the others.

The proof is in what has been selected. Of 825 projects there might be 5 or a maximum of 20 about which someone, anyone, is complaining regarding the design: 90% are noncontroversial. Design review is dependent on how good the reviewers are; sometimes sophisticated panels choose projects which other experts can't believe were selected. Design review certainly has a place though, and it does more good than harm.

**Freudenheim:** If design review were speedy and effective would HUD consider making it mandatory?

**Cordish:** We will do everything possible to encourage good design, but we cannot make it mandatory. However, we have recently contracted with Halcyon, after a national competition, to assist cities and projects with design, where there are special problems.

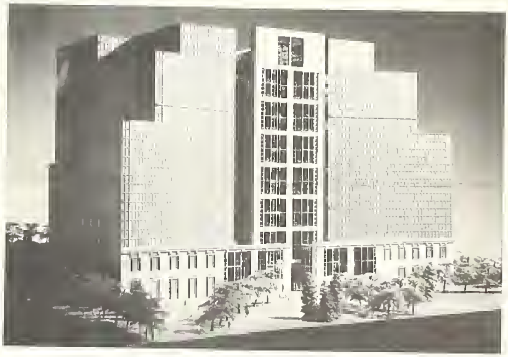
**Freudenheim:** Will cities request Halcyon's help?

**Cordish:** We are sending representatives to places where we think the project would benefit from some expertise. But we can't force the cities to accept their help. This indicates the importance we place on quality design. We're getting a lot of innovative architectural proposals. In Wilmington, Delaware, the president of the Hercules Corporation decided to locate in downtown Wilmington on the river because the design was so imaginative and effective. That design, along with the UDAG money, convinced Hercules to locate downtown rather than on a suburban site they already owned. Let me summarize UDAG's goal in one sentence: Our goal is to make the distressed cities competitive with suburban, affluent areas where it is generally cheaper to build.

**Freudenheim:** Your requirements express the desire to eliminate red tape; yet we must live with the projects built for the next 100 years. Isn't it worth a pause to ensure good design?

**Cordish:** The real question is: is there a better method of getting quality design than we now use, by which we put the onus on the locals? Frankly, I don't know of any better way

Old Quaker Oats silos transformed into the Quaker Square Hilton, Akron, Ohio; Curtis and Rasmussen, architects.



Proposed Headquarters for Hercules Incorporated, Wilmington, Delaware, Kohn, Pedersen, Fox, architects. Facade combines granite and blue-green reflective glass

# Design Review: Could It Really Make a Difference?

**William Fleissig**

The reputation of design reviews is admittedly poor. The process of reviewing a design scheme by a committee or individual is oftentimes incoherent, arbitrary, without established objectives, criteria or time limits, and, in some instances, unaccountable to a higher authority. Design review became part of the public approval procedure in the 1960's primarily because zoning was inadequate to protect neighborhoods from the side effects of large scale redevelopments. What has been the track record of design review? When the process is properly set up and managed, the results can be significantly positive (examples of the Embarcadero Center in San Francisco and Market Street East in Philadelphia come to mind). When the review is unorganized or entirely non-existent, ill-conceived designs have literally wiped out "viable" older neighborhoods (the old scheme for Yerba Buena Center in San Francisco and Boston's redeveloped West End are classic examples).

Over the past five to ten years, new procedures and a better understanding of the development process have made design review more orderly and effective in identifying problem issues early on. This streamlined version has enabled developers, neighborhood residents and city officials to avoid costly time delays that can run in excess of $1,000,000 per month in private carrying costs and lost tax revenue.

Conceptually, there are two types of review systems, discretionary and ministerial review. Discretionary review typically contains implied guidelines where the criteria are vague or purposefully left unclear. The result is that "acceptability" rests with the good taste of the reviewing body.

Ministerial review forces the public sector to identify those criteria for evaluating a project. In addition to setting the rules of the game, time constraints are established so that both the developer and the reviewing body follow set deadlines for submissions, comments and final approval. Probably the most important factor in ministerial review is that the reviewers have benchmarks of what constitutes an acceptable submission, thus diminishing the arbitrariness of the process. In addition, developers know ahead of time what will be examined.

When the Federal Government develops investment programs like UDAG that are especially focused upon city centers and established neighborhoods, the question of proper "fit" within the existing context becomes paramount. Issues such as recognizing established neighborhood boundaries, preservation of certain structures and/or building styles, and designing appropriate building forms that enhance rather than dominate their surroundings are key to the ultimate goal of city revitalization. The added pressure for maximum economic return for every public dollar invested pushes physical considerations into a backseat position.

The current UDAG regulations do not adequately protect project areas from the intrusion of overscaled design and improper fit with existing communities. The current requirements (May 12, 1980) for preliminary application approval include:

- Clearinghouse review from regional agencies;
- Maps depicting location of the project, surrounding land uses, and "related property information";
- EIR, which focuses upon transportation, sewer and water service;
- Preservation check whether existing structures are on the State or Federal registry;
- An assessment of the physical impact of the proposed project on the neighborhood.

Design is mentioned briefly: "applicants are expected to consider the quality of the design of the project."

Zoning adds additional constraints for maximum building density and sometimes maximum heights. However, basic issues such as open space, location, site planning, site access, pedestrian circulation, parking location and its screening, overall building form and scale, and the physical relationship to other proposed or likely developments are not looked at.

Using a project-specific review, drawing from existing city documents on transportation, housing, and community development plans, precise guidelines could be established as part of the rules of the game for that UDAG project. This system is currently used in downtown San Francisco, whereby the developer receives a three- to five-page memorandum at the outset of the project outlining those basic urban design concerns of the planning department.

Setting up such a ministerial review procedure as part of the UDAG preliminary application approval would add approximately a one man-month of work by a city urban designer, producing a ten- to fifteen-page report with the criteria to be used for that project. The review panel ought to include a local city planner, an independent local architect not involved in the UDAG project, a HUD representative, a local developer or real estate economist familiar with building costs and practices, and a neighborhood representative. The notion of hiring outside consultants remains suspect given the political pressures: outside people will not have vested interests and therefore will not be committed to fighting for what might be sensitive local issues. A strict time frame for review and adjustments would ensure completion of the process as the other required items were completed for HUD.

Such a preliminary review should concentrate on fundamental design issues of access, scale, pedestrian and vehicular circulation, height, and open space; specifics such as the facade design or colors of materials ought *not* to be included at this phase of the development. As developers begin to trust the design review process outlined above, they would welcome the opportunity to identify problems early rather than facing lengthy and more costly delays later on.

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# Safdie: Reclaiming Human Scale Planning Without Planners

Excerpts from Moshe Safdie's forthcoming book, *Form and Purpose: Is the Emperor Naked?*

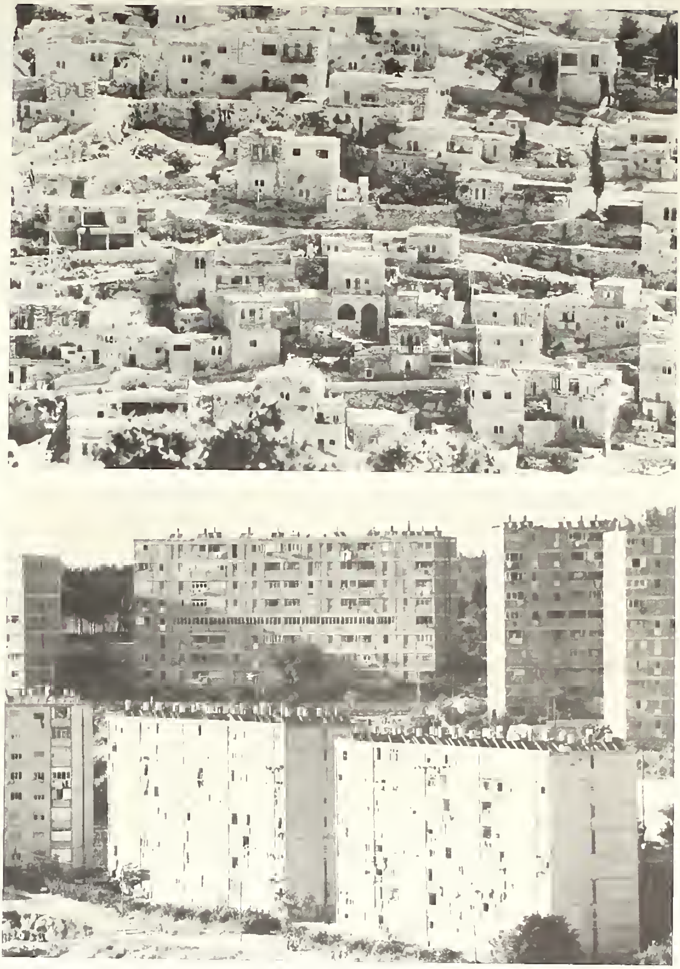
## The Indigenous Builders

In 1967, I visited a settlement near Bethlehem that had been built after 1948 by Palestinian refugees. They had put up buildings that were quite minimal. They used stone and concrete block and tin roofs, but I was overwhelmed by the wholesomeness of the environment they had created. In twenty years they had built houses, created alleys and courts, and planted trees and vines. Both their private domain (within the houses) as well as the public domain (the village square) expressed a sense of wholeness. They had adapted themselves to the site, which was hilly, and they had done it with minimal resources.

In the same period of time, between 1948 and 1968, tens of thousands of immigrants were settled by the Israeli Ministry of Housing in Jerusalem. The Ministry hired the best architects available and was proud of the multidisciplinary team of sociologists, geographers, and economists that had participated in the design process. Yet this team built horrible, anonymous, scale-less four- and five-story structures that cut brutally into the hills of Jerusalem. Some eight-story-high buildings were built with entrance bridges at mid-level on the side of the hill so that they needed no elevators.

Here were two communities, each built at the same time, and two housing solutions. On one side there was a group of people, untrained and probably illiterate, that was dealing successfully by themselves with an environmental problem that directly concerned them. On the other side, there was a professional group, highly trained and sophisticated, backed by a social welfare system, and having all the best intentions in the world—and the result was an unacceptable environment. This posed a whole series of questions for me about the design process, questions that for many in our generation have become important issues.

The idea that connection to an adjoining unit is as important as the unit itself is quite foreign to modern architecture.



Two communities in Jerusalem. One is built by a group of untrained people, who are probably illiterate The other is designed by a multidisciplinary, highly trained, professional group working for a bureaucracy in a country with an advanced social welfare system. The comparison emphasized the difference between a bureaucracy's deciding what is good for people and the people deciding for themselves.

What does this teach us today? What can we learn from it that will help us to resolve our own environmental needs? Is what appears to be a gradual evolution toward perfection a process that we can achieve today? Instead of striving continuously for novelty and individuality or for personal style, should we be more concerned, as the villagers seemed to be, with the gradual improvement of the collective and personal environment?

The next question is, who makes the design decisions? One feature of indigenous society is that the user is directly involved in creating his own environment. If people have a direct say in determining where they live and how it is built (whether they do it with their own hands or not), do they achieve a greater responsiveness to the environment? Surely the comparison between the Ministry of Housing and the Arab refugee settlement emphasizes the difference between, in one case, a bureaucracy's deciding what is good for people and, in the other, the people deciding for themselves.

What contributions have the more sophisticated contemporary builders, who are trained to treat design as a personal art, made toward achieving a wholesome environment? Is it possible that their concerns could ever contribute to the environment in the way the peasants' concerns do?

One of the qualities of indigenous environments is that the sum of the parts is greater than the individual pieces. For example, in desert villages houses are extended over the walkways so that the street is shaded, thereby contributing to the quality of the collective space. In the same way the houses define the edges of the public "room" that constitutes the market square. And, because the vocabulary of forms is complementary, in the end the walls and entrances and roofs combine visually and spatially, just as a symphony combines individual passages and instruments. This principle seems to define the very nature of urbanism; a city or village is not simply a haphazard collection of people working and living independently but represents people converging, so that what each does as an individual contributes to a greater whole. Why were other cultures so successful at this while, by comparison, we continually fail?

Indigenous building is, in essence, an environmental system that is composed of components wherein the collective is as important as the individual.

This is quite different from the attitude toward architecture that predominates in our own time—that architecture is composed of single buildings, each one representing an object in space, with its own *raison d'être*, which very often does not relate to what is around it. The idea that connection to an adjoining unit is as important as the unit itself is quite foreign to modern architecture.

## The Sophisticated Builders

In the Renaissance, for the first time, the architect was identified as an individual. What must it mean to have lived in a culture such as that of the Renaissance in which the efforts of an individual are personalized to such an extreme degree? That is easy for us to answer because we live in a similar situation and are conditioned to it—indeed, we are totally intimidated by it. The pressure to make a mark with one's own style—to innovate and to succumb to the demand for novelty—was so great that each architect tried to show how his work was unique. The same syndrome exists today. Architects, painters, sculptors, and citizens-at-large are conditioned by these attitudes.

Increasingly today, as a result of distorted value systems, we find architects allowing certain symbolic gestures at the expense of down-to-earth, straightforward liveability. Consider the John Hancock building, I. M. Pei's sixty-story glass tower in Boston, a building that has had great impact and media exposure. Pei was engaged to design a building as the headquarters of a prominent insurance company that would house some eight thousand people who would work there eight, nine, or ten hours a day. The architect here is faced with two simultaneous demands. He has to create a space where these thousands of people can do their work, push paper, fill forms, attend meetings, eat their lunches, and go to the toilet; and he has to create a symbol for the John Hancock Company in the Boston cityscape . . .

The Pei building is, in fact, a sparkling sculptural object that declares the presence of the John Hancock Company. Pei's decision to clad the building with mirror glass, making it a glistening jewel that reflects its surroundings, is a clever solution and is an infinitely more effective building for this objective than is the honky-tonk Prudential Tower next door. But then we have to pause and ask what price has been paid in terms of quality of the environment and of liveability. Has the architect given second place to the thousands of people who work in the building? Has he ignored, for example, the basic orientation issue that the north, south, east, and west faces of a sixty-story building should not be treated the same way? That sitting next to a window on the south side is not the same as sitting on the north side? That the sun does not move evenly along the horizon and yet this building is the same on all sides? The Hancock building is a telling example of how contemporary architecture is prepared to pay an environmental price for a symbolic gesture—an unthinkable proposition for the indigenous builders of the past.

## Art, Fashion, and Style

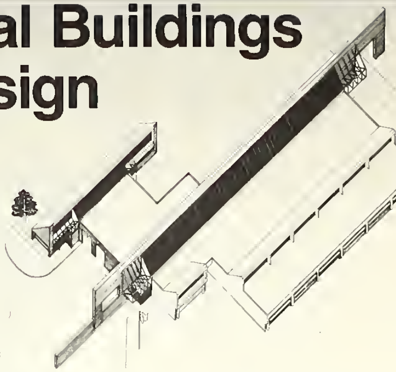
There is something astonishing in the way we have come to look to artists to correct our unsatisfying environment. In recent years we have built hundreds of city squares, plazas, and piazzas, and nearly every one is so desolate that cities have had to commission an artist to do a sculpture, to inject an element that was missing. The Richard J. Daley piazza in Chicago is a prime example. Steel and glass towers rise straight up from ground level. There is no transition, no meeting between building and ground where people can get shelter, no sense of the sun's penetration, no plant life, no animation or human use of that space. Is it for people? Is that a living room of the city? It is not. It is a dead piazza, a memorial to the corporation whose phallic tower dominates it. And then the city had to hire a great artist, Picasso, and commission him to make a sculpture. Three big sheets of steel. Three hundred thousand dollars.

And we have the cheek to call it a public piazza and to give zoning bonuses to the developer for creating this barren land.

It is not just the artist who should be questioned—it is rather a factor in the whole relationship and accountability of architect and artist to society in our culture. It is difficult to blame people for latching on to art to rescue a poor environment when what we so often produce in the way of space for people is inadequate. The only way people know how to enrich it is to turn to painting and sculpture.

# DOE Helps Commercial Buildings with Passive Solar Design

**Sarah P. Herkness**



Joint use facility, Lincoln, Nebraska
Combination Fire station, health clinic and library complex
James A. Dick and Charles L. Thomsen,
The Clark Enersen Partners.

At a time when the architectural community is searching for justification, or fun, or just something new, a government agency (of all things) has realized that design is the integrating factor for any building project. Very different from the earlier ERDA program, which looked primarily to industry and business for hardware solutions, this DOE program stresses software—building design based on analysis and computer modeling.

The scene for the last two of the three DOE reviews was Frank Lloyd Wright's Robie House in Chicago. These quiet, expansive, daylit spaces provided an ideal climate for consideration of passive design.

The passive solar buildings under consideration are small to intermediate in size and represent a wide variety of building programs from all parts of the country—from the Touliatos "Solganic" greenhouses in Memphis, Tennessee, which will be heated by compost and cooled by earth tubes, to a mobile classroom prototype for the Department of Transportation in Fairbanks, Alaska, where one of the problems is that the difference in temperature—approximately 60° inside, approximately −40° outside—may cause the insulating glass to break.

In all of the projects, what was most impressive to me (as an old-fashioned designer) was the thorough analysis of building energy needs in relation to climate and program, and the calculations presented to support the selected passive design strategies. The new energy-conscious architect leans strongly in the direction of engineering and physics, with the aid of computers, to establish a basis for building design and anticipated energy performance. One can question whether it is possible to do extensive solar analysis, and have time left to worry about design. One can also question whether every architect should be proficient at both design and analysis or whether it may be better for two people to work together with mutual respect and understanding, each with their own expertise. Many of the design teams were, in fact, represented by two people, one explaining the energy analyses, the other the architecture.

One of the more sophisticated projects was a library for Mt. Airy, North Carolina, Ed Mazria and Associates, architects. Energy conservation solutions combined day lighting with solar heating. Two patterns of clerestories, and light shelves which reflect light up to the ceiling were employed. Large skylights defined the central circulation space and smaller scale skylights closer together defined the stack space. Marc Schiff, designer for the project in Mazria's office, made the comment that energy analysis is easy; what he worries about is design. I still wonder whether the generalist architect can do it all, especially as one gets into the design of larger buildings.

One of the presenters made a case for intuition rather than reliance on calculations. But what is intuition? Africans know how to build grass huts and bees know how to make hives: they need only know that the system will work. We can't wait to learn everything by experience; hence, computers.

One of the ways the review group was most helpful was in simplification of the designs presented. A particularly well developed project was a combination fire station, health clinic and library complex for Lincoln, Nebraska, presented by James Dick and Charles Thomsen. The design was already the winner in a competition and was well presented. There were numerous energy-conscious strategies. The review group was able to recommend several money-saving ideas: reduction of the Trombe walls; employment of reflecting light shelves to reduce glare at the south windows and to increase light penetration deep into the space; elimination of the active solar collector in favor of allowing the masonry wall to soak up solar heat from one of the clerestory bands; and reducing the number of clerestory skylights. Both architect and owner were pleased by the reduction in cost. In such a new field as passive design, over-design is a natural tendency, not easily resolved without a variety of technical expertise.

Everyone who hopes that energy-conscious design will be successful wonders whether a new formalism will evolve. Judging from the DOE passive commercial projects, the revolution appears to be a quiet one. For style, we saw simple American wood construction with pitched roofs, re-use of old buildings, functional design, and a bit of post modern. The biggest impact may come at the urban design level, where buildings which seek the sun for themselves, must be shaped in such a way as not to shade neighboring buildings. Passive solar design may be a constraint, but it is not a drawback.

Why is this government body, the Department of Energy, interested in such small scale objects as compost-heated greenhouses? Ted Kurkowski, the program's manager, says there's just one reason: fossil fuels—including oil, gas, coal, and nuclear—are too valuable to be burned. To use a fuel that can produce 30,000° when you only need 300° is wasteful.

Charles Schwing, President of AIA, said in his speech at the AIA Convention, "Architecture is too important to be left to architects alone." We could add that buildings are too important for architects not to be included in their design. Working with a group of experts such as the DOE review group, one feels confident that the results will make sense. Our conclusion, then, should be that architecture deserves more time and expertise during the design process.

Although in this program, DOE will also provide aid in the cost of construction of passive features of the projects, the cost of passive features is hard to determine, and for an architect to place a high figure on them in order to get more funding is counter-productive to one of the main arguments for passive design—that it should cost the same or very little more than conventional design.

To my mind, the two most important aspects of the DOE Passive Commercial Buildings Program are the advancement of knowledge in passive design, and the setting of an example of a process of design. Early experience was in houses, now we see individual passive buildings; the next step in scale will be the urban environment and building complexes.

# DESIGN BRIEFS

By Joan Shentz and Marjorielaine Menke Prince

### ASID Board Declines AIA Proposal to Seek Licensing Revision

The Board of Directors of the American Society of Interior Designers, at a recent meeting, turned down a request by the American Institute of Architects that ASID petition the National Council for Interior Design Qualification to revise its "Guidelines for the Statutory Licensing of Interior Design Professionals." The proposed revision would have permitted architects to use the interior design designation without having to comply with the proposed statutory licensing requirements. A motion to request NCIDQ to add an exemption clause for architects failed to achieve the required two-thirds vote.

In explaining the background for the action, ASID officials noted that interior design is a distinct and separate profession requiring special training and preparation and therefore architects should be required to meet the same requirements as qualified interior designers to demonstrate prowess in that function.

### B. L. M. Reviews Their Graphics

The Bureau of Land Management, U.S. Department of the Interior, recently joined with other agencies and departments which have taken advantage of the expert graphics and communications evaluation available through the National Endowment for the Arts.

### Design Michigan

*Design Michigan*, a state design outreach program administered by the Cranbrook Academy of Art, sponsored a design conference this summer focusing on *Community Revitalization Planning and Management: Maximizing Existing Resources Through Design.* The objectives of the conference included learning how to maximize gain from existing organization, economics, energy, cultural arts and environmental resources.

Charles Zucker, Assistant Director of the Arts Endowment's Design Arts Program keynoted the three-day conference. New publications available from *Design Michigan*, as a result of this conference, include *Design Michigan: Your Community 1979 Revitalization Conference Handbook* and *Design Michigan: Revitalization Directory.* For additional information contact Mr. Jack Williamson, Coordinator, *Design Michigan* 313/645-3316.

### The Architect in the Public Sector

The second National Conference of "The Architect in the Public Sector" will be held in New Orleans, February 12 and 13, 1981. AIA president, Charles Schwing, will be sending invitations to the 2,300 known local, state and federally employed architects. The program will include:

—Facility programming and recognition of user needs
—Liability problems of government employees
—Personnel management and organizational development

### Euston Pursues Design at HUD

Andrew Euston, Senior Urban Design Program Officer for HUD has announced Urban Environmental Design (UED) goals to improve the quality of the physical environment by integrating urban design administration with development implementation. UED establishes a new partnership among elected officials, design professionals, legal and financial specialists, community and economic development agencies, zoning and design review boards, as well as citizens, financial institutions, investors and the media. The project will also include a National conference jointly funded with the Arts Endowment on "UED" to be held in the spring of '81.

A seven city UED demonstration project recently completed for HUD and the Department of Transportation by the Project for Public Spaces, Inc. of New York City is the focus of a series of training films for the design improvement of urban spaces in small cities.

A technical guide for local government on Urban Environmental Design Administration will be issued by HUD early next year produced by a research team of interdisciplinary faculties and graduate student staffs from the Rice Center for Community Design and Research, MIT, and the University of California at Berkley. The guide will provide a series of program publications including descriptive case studies of the recent 29 UED National Award winners.

### Publications Available

The following publications are now available from Partners for Livable Places, 2120 P Street, N.W., Washington, D.C. 20037:

*City and the Arts*—A civic handbook on the National Endowment for the Arts. Designed for mayors, city managers, and county executives, the book highlights all grant programs offered by the Arts Endowment that help to enhance the environment of our cities. $2.00.

*How Small Grants Make a Difference*—Descriptions of eight successful NEA Design Arts Program small grant projects. Free.

*Livability Directory. Resources for Community Improvement*—Directory highlights over 320 organizations throughout the country that are working to make their communities more livable. Groups are listed by state with descriptions of purposes and services and indexed by area of interest. 2 50.

*Selected Grant Booklets*—Descriptions of grants awarded by the Design Arts Program of the Arts Endowment. $.50 each: *Adaptive Use; Downtowns; Learning About the Built Environment; Neighborhoods; Open Space/Recreation, Places for the Arts; Professional Education and Development*

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